

THE HISTORY OF THE AVIATION FIELD AT
COLLEGE PARK SINCE 1918

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INTRODUCTION

Less than one month before this thesis was presented there was held at Kill Devil Hill, near Kitty Hawk, North Carolina, the celebration of the twenty-fifth anniversary of the historic flight of Orville Wright in his crude airplane glider. The aviation leaders of the entire world paid homage to this pioneer of the airplane industry. This incident twenty-five years ago started another new era in human progress.

On December 17, 1903 Orville Wright flew one hundred and twenty feet in twelve seconds and merely left the ground. To-day there are such records as: altitude of thirty-four thousand, four hundred and eighteen feet, duration flight of sixty-five hours and twenty-five minutes, non-stop flight of four thousand, two hundred and sixty-six miles, and speed of two hundred and seventy-eight miles an hour. All these accomplishments were over a period of twenty-five years and the greater part of these within the last two years, with new records constantly being made.

Up to the World War ^{was} a period in the development of the airplane and of the airplane motor. There was nothing radical in this development; it just grew. Increased speed, better control, increased duration of flight, better

motors and planes were obtained during this period.

Other men such as Curtis and Simmons entered the aviation game. The United States Government became interested in aviation in 1909, and in 1911 the Signal Corps took up the task of training pilots until the World War.

The World War laid the foundation for modern aeronautics. Before the war there was little demand for flying except for experimentation and excitement. Aviation engineers influenced by the war turned out numerous designs and the government contributed generously to the cause of aviation. The development at that time was too quick but served as a basis for later development. When the war was over the government had vast material on hand, and the many companies and factories that had sprung up were now on the verge of bankruptcy. As a result of this, commercial aviation along with research work began immediately after the war.

The first real impetus to commercial aviation was that the Army Air Service and the Post Office combined and formed the world's first air mail route. This was begun in 1918 and has now developed into the contract air mail system which has proved to be one of the greatest boons to the development of commercial aviation. In the last two years, particularly in 1928, passenger and express transportation

has rapidly progressed. In 1926 the Bureau of Aeronautics was formed under the Department of Commerce, which proved the commercial value of the airplane.

Now that the development of commercial aviation is well under way the Department of Commerce has authorized the Bureau of Standards to conduct tests with radio to further improve flight conditions--and to combat the aviator's worst enemy, fog. In 1928 ninety-seven and three-quarters per cent of licensed airplanes flew without a fatality, and the Department of Commerce reports that the air mail flew nearly one and one-half million miles to each fatality. Today there are thirty-seven air mail, passenger, and express lines in the United States flying about forty-two thousand miles each day. There are more than nine thousand miles of airways equipped for night flying by nearly fifteen hundred beacons, two hundred and seventy-four lighted intermediate fields, and nineteen radio weather reporting and communication stations. There are fifteen thousand, one hundred and twenty-eight miles of airways compared to nine thousand and twenty-one miles of railways on the twenty-fifth anniversary of the railroad. For a long period of time there were only two principal types of airplanes, that is the Wright and the Curtis; now there are eighty-two approved types and a total of seven thousand planes in this country. There are fourteen hundred and

thirty-five airports and eight hundred and ninety proposed ones.

In this introduction I have endeavored in a brief way to trace the development of aviation in general, and in this treatment try to show that the progress has been so rapid in the last few years that all wonder, especially those interested in aviation what the next few years hold in store, both as to further development of the machine itself as well as its use.

THE AIR MAIL AT COLLEGE PARK

The Signal Corps abandoned their instruction school for pilots at College Park in 1912. That was the last time the Government used this field until August 12, 1918.

On May 15, 1918 the War Department started the first air mail line in the world from Potomac Park, D. C. to New York. Army pilots flew the mail. This was tried as an experiment and was successful, and accordingly was transferred to the Post Office Department on Aug. 12, 1918. On that same date the first air mail Post Office in the world was established at College Park, Maryland. This line was from ^{College Park to} Philadelphia to New York. Mail was transferred to and from Washington by truck.

The Post Office used College Park as it was the only field suitable at that time. The field at Potomac Park was very unsatisfactory because of landing conditions.

The air mail service was continued at College Park for nearly two years, during which time they ran three to six model D-H 4 planes. These planes were run by civilian fliers, who in most cases were ex-war pilots.

The Post Office purchased the war planes and built two hangars, a machine shop in which all repairs were made, and used the other wooden hangars that were already on the field. The Post Office had a laboratory here and

conducted many tests and experiments such as: studying night flying aids as regards to landing, parachute testing, radio direction finding, and dropping and picking up mail. In the machine shop all repairs were made by their own mechanics.

In most cases there were four planes stationed at the field at one time. One plane was used for carrying the mail, one for conducting radio experiments, one for a reserve plane in case of breakdown, and the other for testing purposes and training pilots. Mr. J. C. Edgerton was the first chief of flying operations organized in the Post Office and also organized the Post Office radio service for giving out weather reports and flying conditions. He was stationed at College Park and also flew the mail. The Navy field at Philadelphia was used and the Army field at New York. Their radio was used, while at College Park the Post Office installed their own equipment. The radio communication^{was} between these three stations; the radio direction finding tests were not satisfactory, and the planes never made use of the radio.

During this period the College Park to New York air mail route was the only one in the United States. Congress, trying to work on the principle of the steam ship lines and railroads, that is, to promote civil enterprise or in this case, civil commercial aeronautics passed the contract air

mail act which provided that the private lines which submitted the lowest bid could carry the mail. Naturally when this law was passed the Post Office department gave up the College Park to New York route in the summer of 1920. Washington was without mail service from that time until the spring of 1927 when it was put on the trans-continental route. The station for Washington was established at Bolling Field.



Fig. I: View showing the three hangars at College Park used by the Post Office. (The Steel frame work on the right is the remains of one that the Post Office built)

ACTIVITIES OF THE BUREAU OF STANDARDS AT COLLEGE PARK.

I. THE RADIO BEACON

In the fall of 1926 the Bureau of Standards established an experiment station at College Park to do research work concerning the perfection of the radio beacon. The Bureau uses the right hangar shown in Fig. I, and the experiment station and radio tower are shown in Fig. II and Fig. III. The purpose of the Bureau of Standards' work at College Park is to develop and test an efficient radio direction-finding beacon so that air planes may maintain a certain course under adverse weather conditions. The Air Commerce Act of 1926 was responsible for the work at College Park. The Aeronautical Branch of the Department of Commerce began a program of establishing aids to air navigation. A research division of the Aeronautics Branch was organized in the Radio Division of the Bureau of Standards to undertake experimentation and development in this field. The work is still in a primitive stage, but an effective beacon has been developed in the past two years so that commercial use is being made of it, however, the Bureau is still conducting tests at College Park and their other field station, Bellefonte, Pennsylvania.

The early experimental work was done at Dayton, Ohio for the Army Air Service, but until June 22, 1926 little was accomplished. On that date a conference was called by the Bureau of Standards in order to secure information and advice from various organizations which had experience bearing upon the problem. The chief difficulty was to limit the apparatus that was to be carried by the plane. A simple receiving set for information and radio beacon for course finding were the essential parts of the receiving apparatus. The complicated equipment was on the ground.

The two field stations used by the Bureau of Standards are College Park, Md. and Bellefonte^t, Pa. Both are equipped with radio beacons and also radio telephone and telegraph transmitting apparatus. These two stations serve as development laboratories and as model and demonstration stations, and in addition are available to give radio service to the routes on which they are located. The College Park station has a direction radio beacon which is equipped to send signals of the aural interlocking variety and also signals modulated at two low frequencies necessary for the visual indicator system that the Bureau has developed. College Park is also equipped with other special types of equipment for sending of signals for experimental purposes. The whole work in the last year has been to replace the aural

method by a simple visual method although experiments are still being conducted with the aural method. The best developed visual indicator today is the reed type. At College Park experiments are being made on a station course shift indicator to further improve the visual indicator. The first successful test of the reed type visual beacon was made in early 1928 by a flight from New York to College Park. An equipped plane was given to an aviator at New York. He was unfamiliar with the route and was given no maps. By means of this beacon he landed at College Park with no difficulty. This distinctive beacon system at College Park was the first one to be set up in the world. The Bureau has one Fairchild plane equipped at College Park for these tests.

The beacon stations as now developed have a radius of two hundred miles, and marker or location beacons are placed at intermediate points. Arrangements have been made with the Pittscairn Aviation, Inc. on its New York-Atlantic air mail route and with the National Air Transport Company on its New York-Chicago route to fully equip three airplanes each and to operate these airplanes on the beacons at College Park and Bellefonte respectively, on their routine night mail runs.

From these facts it can be seen that commercial aviation is realizing the importance of the radio beacon and it is the results of these tests and future tests at College

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Park and Bellefonte that will supply the need finally
with a highly perfected beacon.



Fig. II - Radio tower and experiment station of the Bureau of Standards at College Park. (The Antennae does not show up in this picture.)

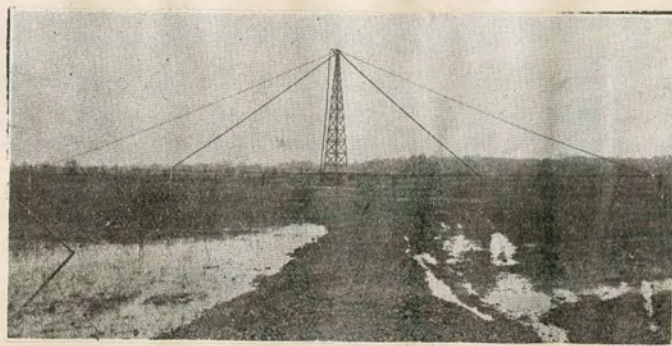


Fig. III- Directive radio beacon station of Bureau of Standards, College Park, Md.



Fig. IV. Temporary beacon apparatus for modulation system, installed at College Park, Md.



Fig. V. Airplane with vertical pole antenna installed.

II TESTING MOTORS

The Department of Commerce issued an order in March, 1928 requiring that motors of airplanes approved by them should undergo certain tests. The Department turned this work over to the Dynamometer Laboratory of the Bureau of Standards. The first engine was tested and witnessed at Detroit. The work was then done at the laboratory in Washington. The work had to be done on the outside and soon complaint was made because of the noise. In May, 1928, at College Park a temporary shed was set up behind the hangar in which is located the radio test plane of the Department of Commerce. Since then motors have been tested here. The average time for testing is one to five weeks and the capacity of the plant is only one engine.

The location here is only temporary. The field is not owned by the government, their work interferes with the radio testing experiments at the field, and the plant is not large enough. On account of these conditions they plan to move to a new laboratory on the Arlington Experimental Farm Area which is owned by the government. A plant that will take care of three motors will be established here. They plan to abandon the field at College Park about the first of March.

AVIATION COMPANIES AT COLLEGE PARK SINCE 1918.

Henry A. Berliner established his airplane company at College Park in the early part of 1921. During the time at College Park he built two helicopters and two monoplanes (a five and a four passenger). In the contract from Mrs. Newman, Mr. Berliner nominally had the whole field, however, he did not use it all. One of the hangars he used as a shop.

Mr. Berliner at first was interested in perfecting what his father had started--the helicopter. The first experiments were conducted on Mr. Corbie's estate near Rockville and he moved out to College Park as soon as he obtained a lease. The helicopter was experimentally a success, but not so commercially because the control was so difficult. Mr. Berliner built the first helicopter that would fly both vertically and horizontally and this was flown at College Park. Mr. Berliner continued his experiments from early 1921 to early 1924. From 1924 until early 1926 he was engaged in work at the Naval Air Station. He returned to College Park in early 1926 and built two planes as was mentioned. No more experiments were tried with the helicopter. In the fall of 1926 Mr. Berliner decided that he wanted to go into airplane manufacturing on a larger scale, and as the expense of fixing up the plant at College Park was too large an undertaking he left, and established a factory at Alexandria, Virginia.

Numerous training schools for pilots have been established at College Park. The B. and M. Airways, Southern Air Lines, The A. A. O. A., and the D. C. Air Legion are the schools that have been established at College Park. All these have been established in 1928 and the latter two are the only ones at College Park now.

The Three Rosenfield brothers have been at College Park off and on since 1918. They leased one of the warehouses and built one themselves. They have bought a lot of war and other airplane equipment and are running a salvage market. Details of their future plans are not public.

SUPPLEMENTARY FACTS CONCERNING THE FIELD

The field at College Park for many years has been under two general ownerships. About one-third which was recently sub-divided is the Newman Estate, owned by the late Mr. Newman; the other two-thirds is known as Krupp's addition to College Park, which is subdivided and owned by many persons. The field contains seventy-five acres. The leases from Mr. Newman were given in order named to the Post Office Department from Aug. 1, 1918 to Jan. 1, 1922; Henry Berliner from Jan. 1, 1922 to Jan. 1, 1928. Mr. Berliner sublet from the Post Office Department through Mr. Newman in 1921. On Sept. 1, 1926 the Department of Commerce filed their lease. Before Sept. 1, 1926 they sublet from Mr. Berliner. When the Department of Commerce took up their lease a verbal agreement was made with Mr. Newman that those who occupied the field should meet with their approval. The B. and M. Airways took out a lease on July 15, 1928 and numerous training schools for pilots sublet from them as mentioned before. There are now at College Park four planes in use, a Travel Air, a Waco, and a Lincoln Page, and the government test plane, a Fairchild. There are three hangars now in use, and the field at present is in good condition.



Fig. VI. General view of the Landing Field



Fig. VII. Plane landing at College Park, Md.



Fig. VIII. Field at College Park, Md. Plane ready to take off. (Note the radio tower in distance)

CONCLUSION

This thesis is the second part of the history of the aviation field at College Park. The war drew a distinct line between the two parts. I have attempted in this thesis to cover all the points of importance and of interest that have occurred at College Park since 1918. Most of my information was obtained by personal interview with the gentlemen connected with the field, as little literature could be found. It can be seen that since the **World War** this has been in most cases an experimental or a research field, and that putting these two histories together the aviation field at College Park has had an active part in the advancement of aviation.

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- Edgar Turner Shoemaker Real Estate Co., Washington, DC.

I had personal interviews with Mr. Joseph Edgerton, Mr. J. C. Edgerton, Mr. T. Neil, Mr. Henry A. Berliner, and Mr. Edgar Turner.